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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,222	06/21/2002	Matthew L. Fisher	016499-944 S-5781	4473

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12/16/2003

EXAMINER

EVANS, FANNIE L

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/064,222

Applicant(s)

FISHER ET AL.

Examiner

F. L. Evans

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-17 and 25-31 is/are allowed.
- 6) ☐ Claim(s) 1-10 and 18-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on June 21, 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. § 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. § 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. § 102(e)).

Claims 1, 7-9, 18 and 23 are rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Carbonell et al et al (US 3,987,808).

Carbonell et al disclose a system for controlling the concentration of a component in a composition comprising: a source of a composition (1, 2, 13) comprising a liquid portion; an absorption spectroscopy measurement apparatus (5) for measuring the concentration of the component; and a feedback control means (column 4, lines 14-24) for controlling the concentration of the component in the composition based on the absorption spectroscopy

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measurement. The concentration of the component is controlled by a diluting device (6). The method of claims 1 and 7-9 is performed the system of Carbonell et al. Applicant's attention is directed to Carbonell et al in its entirety with particular attention directed to lines 21-41 in column 1, lines 31-63 in column 2, lines 11-15 and 66-68 in column 3, and lines 1-24 in column 4.

Claims 1, 7, 9, 10, 18-20, 23 and 24 are rejected under 35 U.S.C. § 102(e) as being clearly anticipated by Nishio et al et al (US 6,507,397 B1).

Nishio et al disclose a system for controlling the concentration of a component in a composition comprising: a source of a composition (50, 56, 20) comprising a liquid portion; an absorption spectroscopy measurement apparatus (2, 3) for measuring the concentration of the component; and a feedback control means (51, 52) for controlling the concentration of the component in the composition based on the absorption spectroscopy measurement. The absorption spectroscopy system comprises a plurality of measurement cells (12, 13, 36, 37, 38). The method of claims 1, 7, 9 and 10 is performed the system of Nishio et al. Applicant's attention is directed to Nishio et al in its entirety with particular attention directed to lines 52-67 in line 3, line 50-67 in column 4, lines 1-32 in column 5 and lines 18-31 in column 8.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 2-6, 21 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Carbonell et al et al (US 3,987,808).

Carbonell et al disclose a system for controlling the concentration of a component in a composition comprising: a source of a composition (1, 2, 13) comprising a liquid portion; an absorption spectroscopy measurement apparatus (5) for measuring the concentration of the component; and a feedback control means (column 4, lines 14-24) for controlling the concentration of the component in the composition based on the absorption spectroscopy measurement. The concentration of the component is controlled by a diluting device (6). The method of claims 1 and 7-9 is performed the system of Carbonell et al. Applicant's attention is directed to Carbonell et al in its entirety with particular attention directed to lines 21-41 in column 1, lines 31-63 in column 2, lines 11-15 and 66-68 in column 3, and lines 1-24 in column 4. Carbonell et al do not disclose that the composition can be used in chemical mechanical planarization or in a semiconductor manufacturing process.

At the time the invention was made, it would have been obvious to one with ordinary skill in the art that a method and system as disclosed by Carbonell et al could have been used for controlling the concentration of a component in a composition used in chemical mechanical planarization or in a semiconductor manufacturing process, if desired, because the steps of the method and the structure of the system are the same, only the composition being measured is different.

***Allowable Subject Matter***

Claims 11-17 and 25-31 are allowed over the prior art of record.

As to claim 11, the prior art of record, taken alone or in combination, fails to disclose or render obvious a semiconductor processing method comprising the step of contacting a semiconductor wafer with a solution comprising a component to be monitored, in combination with the rest of the limitations of the claim.

As to claim 25, the prior art of record, taken alone or in combination, fails to disclose or render obvious a semiconductor processing system comprising a chemical bath tank containing a solution for treating a semiconductor substrate and one or more conduits for introducing process materials into the chemical bath, in combination with the rest of the limitations of the claim.

***Fax/Telephone Numbers***

Papers related to this application may be submitted to Technology Center 2800 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The fax number for Technology Center 2800 is (703) 872-9306 for regular and After Final communications.

If applicant wishes to send a fax containing a Proposed Amendment for discussion during either a personal interview or a telephone interview then the fax should:

- 1) Contain either the statement "**DRAFT**" or "**PROPOSED**"

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**AMENDMENT"** on the Fax Cover Sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that the amendment will not be entered into the application and will be forwarded to the examiner as quickly as possible.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner whose telephone number is (703) 308-4805. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font, can be reached on (703) 308-4881. The TC Receptionist's telephone number is (703) 308-0956.

Any other inquiry of a technical nature, and all inquiries of a general nature including those relating to the status of an application should be directed to TC 2800 Customer Service Office whose telephone number is (703) 306-3329.

  
**F. L. EVANS**  
**PRIMARY EXAMINER**  
**ART UNIT 2877**

file  
December 6, 2003